

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A home network electric device for communicating with another electric device on a network by including an application layer, a network layer, a data link layer and a physical layer, system, comprising:

a network based on a predetermined protocol;

at least one electric device connected to the network; and

a network manager connected to the network, for controlling and monitoring the electric device,

wherein the protocol comprises an application layer handles for handling a message for controlling and/or monitoring the network electric device or the other network electric device,

the a network layer connects for network connecting the electric device to the other network electric device manager,

the a data link layer accesses for accessing a shared transmission medium, and

the a physical layer provides for providing a physical interface between the network electric device and the other network electric device manager, and

wherein the network electric device includes:

an application software for performing an intrinsic function of the network electric device, and providing an interface with the application layer;

a network management layer for managing a parameter or the network electric device accessing the network; and

a parameter management layer for setting, getting or transmitting a parameter used in the application layer, the network layer, the data link layer and the physical layer upon the request of the network management sub-layer

the physical layer further comprises a special protocol for providing an interface with a dependent transmission medium, and the network layer further comprises a home code control

~~sub layer for managing a home code for network security when accessing the dependent transmission medium.~~

2. (Currently Amended) The network electric device system of claim 1, wherein the physical layer further comprises a special protocol for providing an interface with a dependent transmission medium, and the network electric device includes a home code control sub-layer for managing a home code for network security when accessing the dependent transmission medium protocol performs an intrinsic function of the electric device or the network manager, and further comprises an application software for providing an interface with the application layer.

3. - 6. (Cancelled)

7. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the physical layer and the data link layer comprises at least one of a frame sending primitive, a frame receiving primitive and a line status transmitting primitive.

8. - 9. (Cancelled)

10. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the data link layer and the network layer comprises at least one of a packet sending primitive, a packet receiving primitive and a data link layer completing primitive.

11. - 14. (Cancelled)

15. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises at least one of a request message sending primitive, a message receiving primitive and a network layer completing primitive.

16. - 20. (Cancelled)

21. (Currently Amend) The network electric device system of any one of claim claims 15 to 20, wherein the network electric device performs protocol is applied to the network manager and/or electric device performing a master function.

22. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises at least one of a request message receiving primitive, a response message sending primitive, an event message sending primitive and a network layer completing primitive.

23. - 28. (Cancelled)

29. (Currently Amended) The network electric device system of any one of claim claims 22 to 28, wherein the network electric device performs protocol is applied to the electric device performing a slave function.

30. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the application layer and the application software comprises at least one of a user request primitive, a user download request primitive, a user upload request primitive, a user response primitive, a user event receiving primitive and an application layer completing primitive.

31. - 37. (Cancelled)

38. (Currently Amended) The network electric device system of any one of claim claims 30 to 37, wherein the network electric device performs protocol is applied to the network manager and/or electric device performing a master function.

39. (Currently Amended) The network electric device system of either claim 1 or 2, wherein the interface between the application layer and the application software comprises at least one of a user request receiving primitive, a user response sending primitive and a user event sending primitive.

40. - 42. (Cancelled)

43. (Currently Amended) The network electric device system of any one of claim claims 39 to 42, wherein the network electric device performs protocol is applied to the electric device performing a slave function.

44. (Currently Amended) The network electric device system of claim 1, wherein the parameter of the physical layer comprises a communication speed.

45. (Currently Amended) The network electric device system of claim 1, wherein the parameter of the data link layer comprises at least one of frame timeout, a maximum frame allowable interval time, a minimum packet allowable interval time, a backoff retry number, a maximum transmission allowable time, a busy check time and a transmission delay time.

46. (Currently Amended) The network electric device system of claim 1, wherein the parameter of the network layer comprises at least one of a product code, a node address, a cluster code, a home code, a maximum retry number, transmission timeout, a response delay time, a transmission delay time and a duplicate packet elapsed time.

47. (Currently Amended) The network electric device system of claim 1, wherein the parameter of the application layer comprises ~~at least one of~~ a transmission interval between address request messages, a transmission interval between active event messages, a buffer size, service timeout and a transmission interval between download messages.

48. (Currently Amended) The network electric device system of any one of claims 1 or ~~2~~ 6 or 44 to 47, wherein the network management sub-layer interfaces with the parameter management layer through ~~at least one of~~ a parameter setting primitive and a parameter getting primitive in order to set or get at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.

49. (Currently Amended) The network electric device system of claim 48, wherein the parameter management layer interfaces with the physical layer, the data link layer, the network layer or the application layer through ~~at least one of~~ a parameter setting primitive, a parameter getting primitive and a parameter transmitting primitive in order to set, get or transmit at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.